

**REMARKS**

The Examiner's outstanding Office Action mailed November 12, 2008 (the "Office Action") has been carefully considered. Claims 4, 7, 9, 11, 18, 32, 37, and 40 have been amended. Claims 2-26, 32 and 35-41 are pending in this application and stand rejected. Applicant respectfully submits that in view of the amendments made and the remarks that follow the application is in condition for allowance. Applicant respectfully requests allowance of this application.

Embodiments of the claimed invention include a measurement system and method that combines an audio announcement system with a plurality of spaced apart sensors to evaluate intelligibility of audio output from loudspeakers of the audio announcement system. The system can include microphones that receive audio from the loudspeakers, and the microphones can receive substantially all of the audio in an associated geographic area regardless of frequency. In some embodiments, ambient condition detectors are included in the system, and some ambient condition detectors can carry a microphone. In further embodiments, the microphones are separate from the loudspeakers.

**I. Claims 2-3**

Applicant respectfully traverses the Office Action's rejection of claims 2-3 under 35 U.S.C. § 103 as being unpatentable over Albus (U.S. Publication No. 2002/0015502) in view of Koike (U.S. Patent No. 5,635,903).<sup>1</sup> As the Office Action correctly notes on page 6 thereof,

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<sup>1</sup> The Office Action notes on page 5 thereof that claims 2-3 are rejected under 35 U.S.C. § 102(b). However, the Office Action also notes that claims 2-3 are rejected for being unpatentable, not anticipated, and discusses the combination of the Albus and Koike references making the claimed invention obvious. Accordingly, applicant is treating the rejection of claims 2-3 as a rejection under 35 U.S.C. § 103.

Albus fails to disclose a plurality of ambient condition detectors with at least some of the microphones carried by respective ones of the detectors. However, applicant respectfully traverses the Office Action's assertion that Koike makes up for the deficiencies of Albus.

Rather, Koike discloses a plurality of sensors that are part of a sensor assembly 2. Koike also discloses a noise sensor 10. However, as seen in FIG. 1 of Koike, the sensor assembly 2 and the noise sensor 10 are separate and distinct. That is, the noise sensor 10 is not carried by the sensor assembly 2 or any of the individual sensors that are part of the sensor assembly. This is quite different and unlike the claimed invention.

Furthermore, absent the present disclosure, it would not have been obvious to one of ordinary skill in the art to modify Albus in view of Koike to make the claimed invention. Neither Albus nor Koike teach, suggest, or disclose a microphones being carried by an ambient condition detector.

For at least these reasons, applicant respectfully submits that claims 2-3 are not obvious over Albus in view of Koike. Therefore, applicant respectfully requests allowance of these claims.

**II. Claims 4-6, 9-17, 32, 35-36, and 38-39**

Applicant respectfully traverses the Office Action's rejection of claims 4-6, 9-15, 32, 35-36 and 38-39.

A. § 102 Rejections

Applicant respectfully traverses the Office Action's rejection of claims 4-6, 9-15, 32, and 35 under 35 U.S.C. § 102(b) as being anticipated over Albus. Unlike the claimed invention, Albus merely discloses an audio system for motor vehicles. In Albus, the system includes loudspeaker units 2a, 2b, 2c, 2d, and each loudspeaker unit includes a woofer 4, a midrange unit 5, and a tweeter 6. The tweeter 6 can function as a loudspeaker at some frequencies and a microphone at some frequencies, but the tweeter cannot function as a microphone at all frequencies. The tweeter 6 is connected to an amplifier 20, but, as explained in Albus, the "amplifier 20 amplifies only the low-frequency voltages and forwards them to the signal detection unit 22." Albus, par. [0034]. That is, "the physical design of the tweeter . . . means that it may be used as a microphone only up to a frequency  $f_{ll}$ ." Albus, par. [0035] (emphasis added).

Conversely, claims 4-6 and 9-10 require, in part, that "each of the microphones is capable of receiving substantially all audio in an associated geographic region in which that microphone is located" (emphasis added). Similarly, claim 32 requires, in part, that "each of the acoustic sensors is capable of receiving substantially all audio in an associated geographic region in which that acoustic sensor is located" (emphasis added) and claim 11-15 requires, in part, "generating and providing" a test signal "at a plurality of different frequencies" and "sensing" that test signal "at substantially all of the different frequencies in the plurality" (emphasis added). That is, the microphones and acoustic sensors in the claimed invention are not limited to receiving audio at only certain frequencies, and the method of the claimed invention is not limited to generating, providing, and sensing at only certain frequencies. This is quite different and unlike the system disclosed in Albus.

Further unlike claims 4-6, 9-10, 32, and 35, in Albus, even when the tweeter 6 functions as a microphone, the tweeter is still a part of and housed in a loudspeaker unit. Conversely, claims 4-6, 9-10, 32, and 35 require, in part, that the audio output device “is separate from the microphones” or “is separate from the acoustic sensors.” This is quite different and unlike the system disclosed in Albus.

For at least these reasons, applicant respectfully submits that claims 4-6, 9-15, 32, and 35 are not anticipated by Albus. Therefore, applicant respectfully requests allowance of these claims.

B. §103 Rejections

Applicant respectfully traverses the Office Action’s rejection of claims 16-17 under 35 U.S.C. §103 as being unpatentable over Albus and claims 36 and 38-39 as being unpatentable over Albus in view of Ando (U.S. Publication No. 2004/0004546).<sup>2</sup>

With respect to claims 16-17, the Office Action correctly notes on page 7 thereof that Albus fails to disclose the sensed speech intelligibility test signals being processed prior to being coupled to a common site. However, as explained above with respect to claims 11-15, Albus also fails to disclose “generating and providing” a test signal “at a plurality of different frequencies” and “sensing” that test signal “at substantially all of the different frequencies in the plurality” (emphasis added). Furthermore, the Office Action has not provided any reason why it

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<sup>2</sup> The Office Action notes on pages 7 and 9 thereof that claims 16-17, 36 and 38-39 are rejected under 35 U.S.C. § 102(b). However, the Office Action also notes that claims 16-17, 36 and 38-39 are rejected for being unpatentable, not anticipated, and discusses the combination of the Albus and Ando references making claims 36 and 38-39 obvious. Accordingly, applicant is treating the rejection of claims 16-17, 36 and 38-39 as a rejection under 35 U.S.C. § 103.

would have been obvious to one of ordinary skill in the art, absent the present disclosure, to modify Albus and make up for its deficiencies.

With respect to claim 36, the Office Action correctly notes on page 13 thereof that Albus fails to disclose a plurality of distributed ambient condition detectors. However, as explained above with respect to claim 32, Albus also fails to disclose that each of the acoustic sensors is capable of receiving substantially all audio in an associated geographic region in which that acoustic sensor is located" (emphasis added) and that the at least one audio output device "is separate from the acoustic sensors."

The Office Action cites to Ando merely for the proposition that the Ando system includes a plurality of sensors. However, merely disclosing a plurality of sensors does not make up for the deficiencies of Albus discussed above. Therefore, it would not have been obvious to one of ordinary skill in the art to modify Albus to make the claimed invention.

With respect to claims 38-39, applicant respectfully submits that the Office Action does not provide any explanation how it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Albus to make up for its deficiencies discussed above with respect to claim 32. Furthermore, applicant respectfully traverses the Office Action's assertion on page 15 thereof that executable instructions for producing speech intelligibility test signals to be audibly output by the at least one audio output device are inherent in the control unit 7 of Albus. Rather, the inclusion of executable instructions are merely one possibility to produce speech intelligibility test signals that are audibly output.

"The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." MPEP § 2112(IV).

“In relying on the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”

MPEP § 212(IV) (citing *Ex parte Leve*, 17, U.S.P.Q.2d 1461,1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original)). Certainty is required.

In Albus, it is not necessary that the control unit 7 includes executable instructions to produce speech intelligibility test signals. Rather, the control unit could use logic, for example, to produce speech intelligibility test signals. Accordingly, the Office Action’s inherency argument is misplaced.

For at least these reasons, applicant respectfully submits that claims 16-17 are not obvious over Albus, and claims 36 and 38-39 are not obvious over Albus in view of Ando. Therefore, applicant respectfully requests allowance of these claims.

### III. Claims 7-8, 18-26, and 37

Applicant respectfully traverses the Office Action’s rejection of claims 7-8, 18-26, and 37 under 35 U.S.C. § 103 as being unpatentable over Albus in view if Ando.<sup>3</sup> The Office Action correctly notes on page 9 thereof that Albus fails to disclose a plurality of distributed detectors of ambient airborne conditions and on page 14 thereof that Albus fails to disclose a plurality of smoke detectors. However, Albus also fails to disclose microphones that are “capable of receiving substantially all audio in an associated geographic region” (claims 7-8) (emphasis added), microphones that are “capable of receiving signals at substantially all audible

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<sup>3</sup> The Office Action notes on pages 9 thereof that claims 7-8, 18-26, and 37 are rejected under 35 U.S.C. § 102(b). However, the Office Action also notes that claims 7-8, 18-26, and 37 are rejected for being unpatentable, not anticipated, and discusses the combination of the Albus and Ando references making claims 7-8, 18-26, and 37 obvious. Accordingly, applicant is treating the rejection of claims 7-8, 18-26, and 37 as a rejection under 35 U.S.C. § 103.

frequencies (claim 18-26) (emphasis added) and “acoustic sensors [that] can receive speech intelligibility test signals at substantially all of the plurality of different frequencies” produced and audibly emitted (claim 37) (emphasis added). With respect to claim 37 specifically, Albus also fails to disclose at least some of the smoke detectors carrying acoustic sensors.

Furthermore, applicant respectfully submits that Ando does not make up for the deficiencies of Albus discussed above. For example, the system disclosed in Ando includes sensors 13, and the sensors 13 can be various types of sensors, including a smoke detector or an acoustic sensor. However, while each individual sensor 13 can be a smoke detector or an acoustic sensor, for example, Ando does not include a smoke detector sensor carrying an acoustic sensor. Rather each sensor in Ando is separate. Accordingly, it would not have been obvious to one of ordinary skill in the art, absent the present disclosure, to make the claimed invention.

For at least these reasons, applicant respectfully submits that claims 7-8, 18-26, and 37 are not obvious over Albus in view of Ando. Therefore, applicant respectfully requests allowance of these claims.

#### **IV. Claims 40-41**

Applicant respectfully traverses the Office Action’s rejection of claims 40-41.<sup>4</sup> Specifically, applicant respectfully traverses the Office Action’s rejection of claim 40 under 35 U.S.C. § 103 as being unpatentable over Albus. The Office Action correctly notes on page 8

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<sup>4</sup> The Office Action notes on pages 7 and 9 thereof that claims 40-41 are rejected under 35 U.S.C. § 102(b). However, the Office Action also notes that claims 40-41 are rejected for being unpatentable, not anticipated, and discusses the combination of the Albus and Ando references making claim 41 obvious. Accordingly, applicant is treating the rejection of claims 40-41 as a rejection under 35 U.S.C. § 103.

thereof that Albus fails to disclose transmitting a speech intelligibility indicium to a displaced site. However, Albus also fails to disclose “a plurality of microphones which are separate from the plurality of loud speakers” and microphones that are “capable of receiving substantially all audio in an associated geographic area” (emphasis added). Furthermore, the Office Action has not provided any reason why it would not have been obvious to one of ordinary skill in the art to modify Albus to make up for its deficiencies.

Applicant also respectfully traverses the Office Action’s rejection of claim 41 under 35 U.S.C. § 103 as being unpatentable over Albus in view of Ando. The Office Action correctly notes on page 15 thereof that Albus fails to disclose a plurality of smoke detectors where at least one microphone is carried by a respective detector and coupled thereto. However, applicant respectfully traverses the Office Action’s assertion that Ando makes up for this deficiency of Albus as well as the deficiencies of Albus discussed above with respect to claim 40.

The system disclosed in Ando includes sensors 13, and the sensors 13 can be various types of sensors, including a smoke detector or a microphone. However, while each individual sensor 13 can be a smoke detector or a microphone, for example, Ando does not include a smoke detector sensor carrying a microphone sensor. Rather, each sensor in Ando is separate. Accordingly, it would not have been obvious to one of ordinary skill in the art, absent the present disclosure, to make the claimed invention.

For at least these reasons, applicant respectfully submits that claim 40 is not obvious over Albus and claim 41 is not obvious over Albus in view of Ando. Therefore, applicant respectfully requests allowance of these claims.

**V. Closing Remarks**

Applicant submits that the subject application is in condition for allowance and respectfully requests allowance of the application. Should the Examiner be of the opinion that a telephone conference would expedite the prosecution hereof, the Examiner is respectfully requested to call the undersigned at the below-listed number.

The Commissioner is hereby authorized to charge any additional fee which may be required for this application under 37 C.F.R. §§ 1.16-1.18, including but not limited to the issue fee, or credit any overpayment, to Deposit Account No. 23-0920. Should no proper amount be enclosed herewith, such as a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 23-0920.

Respectfully submitted,

Dated: February 12, 2009

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